be cells shed from the peptic glands. By cleansing the stomach from this foul coating, in which fermentative processes would readily occur, the food subsequently introduced was, probably on that account, more thoroughly digested. Possibly a weak solution of some antiseptic such as boracic acid would have acted better.

Many cases such as this, no doubt, recover by simple feeding, but even in these lavage would, I believe, hasten recovery; others, however, die, as this man would have done; in these cases lavage would give a better chance of recovery. In all cases of refusal of food by the insane this treatment is worth a trial, for whilst in many cases of simple gastritis it helps to cure the affection, in cases of malignant disease it might enable a diagnosis to be made by microscopic examination of the washings, and in no case can it do any harm. The principle on which it is based, namely, that of removing the unhealthy discharge from an inflamed surface, is one of the axioms of surgery.

An Analysis of 131 Male Criminal Lunatics admitted to the West Riding Asylum, Wakefield, during the years 1884-1896, inclusive. Being a Graduation Thesis presented to the University of Edinburgh.* By FREDERIC P. HEARDER, M.D.Edin., Assistant Medical Officer, West Riding Asylum, Wakefield.

The period chosen is from the introduction of "The Criminal Lunatics Act, 1884," to the end of the year 1896, and male cases only are considered.

Criminal lunatics are divided into two classes:—

"(a) Any person for whose safe custody during her Majesty's pleasure her Majesty or the Admiralty is authorised to give order; and

"(b) Any prisoner whom a Secretary of State or the Admiralty has in pursuance of any Act of Parliament directed to be removed to an asylum, or other place, for the reception of insane persons:" † or, shortly, Queen's Pleasure Lunatics and Secretary of State's Lunatics; the former, seven in number, having an indefinite, the latter, 124, a definite period to serve, viz., to the determination of the sentence of the court.

^{*} Read at the first meeting of the Northern and Midland Division of the Medico-Psychological Association, October. 1897.
† Archbold's Lunacy, 4th Edition, p. 800.

During the same period 29 cases were received from prison, as pauper lunatics, at the expiration of their sentences; six military cases; nine cases transferred from the Criminal Lunatic Asylum, Broadmoor; and one ticket-of-leave man from Portland Convict Prison. These cases are sometimes, but erroneously, termed Criminal Lunatics, and are not further considered.

The cases were received from Her Majesty's Prisons at Wakefield, Leeds, and Armley, the prisons of the West Riding of Yorkshire, and were largely composed of the lowest grade of the mining and manufacturing population of that district. The degree of education of the majority was very low, many, indeed, being unable to read and write. Of the total 53 were labourers; 16, ironworkers; 11, tradesmen; six, miners; four, engine-drivers; three, clerks; three, hawkers; two, tramps; and one of each of the following:—Journalist, printer, schoolmaster, farmer, leather-currier, the remainder being made up of mill-hands, etc.

Their ages were as follows:-

17-19	20-29	30-39	10-4 9	50-59	60-66
2	34	42	31	17	5

The average age was 37 years. The oldest case, aged 66 years, was sentenced to one month imprisonment for breaking windows. He remains in the asylum, after more than three and a half years, hopelessly insane and deluded. He frequently threatens to kill some mysterious "Smith," and on one occasion stole and secreted a knife. The youngest, aged 17 years, was sentenced to one month imprisonment as a "vagrant, sleeping out." He was a congenital imbecile, with hallucinations of a persecutory character, was impulsive, quarrelsome, and violent. He was discharged "relieved" mentally, in six months.

Seventy of the cases were single; 49 were married; and 12 widowed; 102 belonged to various Protestant denominations; 28 were Roman Catholics, and the religious views of one case were unknown.

The offences for which they were convicted were as follows, in order of frequency:—Larceny, 45; rogue and vagabond, 13; drunk and disorderly, 11; assault, eight; indecent assault, seven; brawling, six; housebreaking, six; attempted suicide, six; begging, five; horsestealing, three; threatening, three; murderous assault, three; shooting, two; breaking glass, two; embezzlement, two; neglecting the xliv.

family, two; with one case of each of the following:—Manslaughter, interfering with railway points, libel, travelling without a ticket, army deserter, cruelty to a horse, and bestiality. Included in the above are the Queen's Pleasure Lunatics, two of whom were sentenced for attempted suicide, and one for each of the following offences:—Shooting, manslaughter, wounding, indecent assault, and larceny. The sentences varied from five years to 10 days; two cases for five years; one for three; three for two; 11 for 1½; one for 1½; and seven for one year, the remainder being for lesser terms of imprisonment.

Two of the number only showed no symptoms of insanity after admission, and were discharged after a few days as "not insane," considered to have been malingering; 19 cases were congenitally defective, without epilepsy; eight were cases of epileptic insanity; 36 suffered from general paralysis; 31 from mania; 26 from melancholia; and nine

from dementia.

The number of "congenital cases, without epilepsy," 19, calls for remark, being more than 14 per cent. of the total criminal cases, while for the same period, taking all the similar male admissions to the asylum, the percentage to the total male admission rate was under seven. The number of "general paralytics," 36, is also very large, being 28 per cent. of the total criminal admissions.

During the same period the percentage of all the male general paralytics to the total male admissions was 18, this, of course, including the criminal cases under consideration.

Of the general paralytics 24 were maniacal, and 12 demented on admission. Many ran an exceedingly rapid course. One of these cases in a fall stained a fracture of the femur, which made a good union.

Twenty of the maniacal cases were fairly acute, but none suffered from typical "acute mania;" six were chronic, one recurrent, and four were cases of "mania a potu." Of the melancholiacs 24 were acute, one chronic, and one recurrent.

More than one half of the maniacal and melancholic cases might well be termed cases of "delusional insanity" since their delusions and hallucinations formed the most prominent phase of their alienation.

In considering the form of insanity of the cases, one is at once struck by the large number of hopeless cases, from a recoverable point of view, and this is fully borne out by statistics, for of the discharges 23, or nearly 18 per cent., were recoveries, as against 36 per cent. male recoveries on the total male admissions for the same period, leaving the large number of 106, or 82 per cent., as incurable. One case having recovered some time previous to the expiration of his sentence was returned to prison. (The two cases discharged as "not insane" are excluded from these statistics.)

Of these 106 cases, 28 were discharged "relieved" to their relations or to the guardians, any acute symptoms they may have exhibited having subsided. Twenty-three were, after the expiration of their sentence, transferred to other asylums as pauper patients, their unions of settlement not being of the districts sending their patients to the West Riding Asylum, Wakefield; the procedure adopted being, on the approach of the expiration of the sentence on a case, to obtain a magistrate's order for the further detention of the case, being still insane, making him chargeable prima facie to the union in which the offence was committed, leaving the burden of finding his correct settlement to that union's authorities.

Thirty-one cases died, or 25.5 per cent., the average deathrate for all males for the same period being nearly 24 per cent. calculated on all the male admissions. The death-rate for males calculated on the average of numbers resident for the same period was 15 per cent.

The death-rate in the criminal cases is really much higher than the figure 25.5 per cent. represents, since many cases were transferred to other asylums after but short residence in this asylum.

This high rate is brought about by the large numbers of general paralytics. Of the 31 deaths one was a congenital case, 25 were general paralytics, one maniacal, one melancholic, and three were demented.

But for the general paralytics the death-rate would be very low, as one would expect from the class of admissions, there being an almost complete absence of acute or senile

In the case of a criminal lunatic dying before the expiration of his sentence, it is the duty of the coroner to hold an inquest on the body. This point is not mentioned in "The Criminal Lunatics Act, 1884."

Their health and condition on admission was described as good in 50 cases, fair in 64, and poor in 17; prison regimen,

especially in short sentence cases, undoubtedly reducing the bodily condition.

At the end of the year 1896 there remained in the asylum 24 cases who had been admitted as criminal lunatics, the period of their residence varying from twelve years to three months, the average period being four years. The number of cases whose sentences had not expired was five.

In studying the etiology of these cases even greater difficulties were met with than in the case of ordinary pauper lunatics in obtaining reliable information as to the history of the cases, and especially so as regards their family history. In several cases it was impossible, as no relations were known.

The probable causes and combinations of causes of insanity in these cases are as follows:—

Worry, 5; intemperance in drink, 86; sexual excess, 8; venereal disease, 23; masturbation, 4; sunstroke, 4; injury, 3; privation, 1; previous attacks, 21; heredity, 20; congenital defect, 19; laudanum habit, 1; nostalgia, 1; and in 12 cases no cause could be ascertained.

The cranium was malformed in 22 cases:—asymmetry, microcephalus, hydrocephalus, low receding foreheads, and narrow highly arched palates were noted.

Twenty-two cases showed other stigmata of degeneracy:

—Prominent or malformed ears, strabismus, corneal opacities, old iritis, large herniæ, extensive psoriasis, small-pox marks, bodily deformity, degraded facial expression, and tattooing were found.

The cases in which malformed heads were noted include a few of the cases in which other stigmata were present.

Four cases had previously been drummed out of the army and one was an army deserter.

Sixteen cases were ascertained to have been previously convicted. Others probably had, but this is not certainly known. One case, having 11 previous convictions against him, was sentenced to 5 years' penal servitude with 5 years' police supervision for stealing; he is a chronic maniac, is noisy, abusive, and has hallucinations of sight and hearing.

In no case could prison life be definitely given as a cause of the insanity, but it undoubtedly had great effect in moulding its form in many cases, there being a remarkable similarity in the delusions and hallucinations expressed by these cases. The probable explanation of this similarity is to be found in the prison regime. In the long hours of soli-

tary confinement cases on the borderlands of insanity, or already insane, are all subjected to the same sounds and other influences from without which they are unable to interpret correctly; this, combined with the prohibition from conversation with their fellows during exercise, would naturally tend to the fostering of wrong impressions and the gradual evolution of systematized delusions.

The number of cases in which alcoholism was ascertained is largely in excess of the general lunatic population; the same remark applies to the cases which showed evidence of venereal disease, but in a much greater degree. Indeed, this is to be expected when we consider that the majority were drawn from the lowest grade of society. The actual percentages, comparing the criminal cases with all the male admissions for the same period, are:—Alcoholism in 66.6 criminal to 31.2 general; venereal diseases in 17.8 criminal to 2.2 general.

The most prominent symptom of insanity displayed was delusion, no less than 47 cases expressing delusions persecutory in character, e.g., false imprisonment, conspiracy against them; that they were going to be poisoned was frequently expressed, to be burned, that cancer was put in the food, that filth was put in the food, that they were damned spiritually; two cases who claimed to be Christ were noisy, abusive, and foul-mouthed, against the fidelity of the wife, witchcraft, etc.

Religiose, sexual, and persecutory delusions were frequently found together in the same case.

Twelve cases, not included in the above 47, expressed delusions of grandeur. These were, in the main, general paralytics in the early stage, one of whom was sentenced for

paralytics in the early stage, one of whom was sentenced for travelling without a ticket, another for stealing a chemise, at a time when both considered themselves worth millions of

pounds.

Forty-two cases had hallucinations of one or more of the special senses, the most frequently found being "the hearing of voices;" visual hallucinations were fairly common, olfactory less so, of taste were rare; various paræsthesiæ were common in the alcoholic cases. In the majority of cases the hallucinations were painful and persecutory in character, those of a pleasing nature being almost absent. Some of the hallucinations were that chloroform was administered, chemical vapours in the air, odours or dust thrown into the air of the room, phonographs applied, and in several cases that telephone wires were attached to the bedsteads, etc., to

learn what they were thinking about and to worry them in other ways.

In two cases, both of whom had double aortic murmurs with hypertrophied hearts, these electrical delusions and hallucinations were very persistent. The one case died in this asylum, having never lost them. The other, a fairly educated man, a journalist, at the expiration of his sentence was transferred to another asylum, and there being a technical error in the magistrates' order for his further detention as a pauper, was discharged. He then published a pamphlet describing his experiences in the asylum, and brought numerous charges against the administration of the institution and the medical staff for their electrical ill-treatment of him, amongst other things saying that one of the airing grounds was heated to an unbearable pitch by electricity. Since his discharge, about nine months ago, he has on several occasions attempted, and is still attempting, to obtain summonses against members of the staff and others. From letters which he writes he still believes himself to be acted upon by electricity from this asylum, although he lives in another county.

A very small number refused food to the extent of needing

to be fed by the tube.

The criminal cases are, as a class, refractory. Forty-two cases exhibited violence to a marked degree towards their fellow patients and members of the staff. One case, who remains in the asylum after more than 11 years, exhibits postepileptic automatism, in which state he is at times very dangerous. Eleven cases attempted escape, using violence in the attempt or at their recapture.

Thirty cases were restless and noisy, a large proportion of

these, but by no means all, being general paralytics.

Twenty-one were very destructive of bedding, clothes,

books, plants, etc.

Four cases had a predilection for breaking glass on every opportunity. One of these cases suffered from petit mal. He could converse rationally, but was of a rather sulky disposition. He had been turned out of the army for striking, and had been very violent and destructive of glass in the prison. In the asylum he was impulsive, and would suddenly turn and strike anyone near him without the smallest provocation, or, if near glass, would strike at it, and on several occasions he cut himself severely. He attempted escape, and fractured his os calcis in dropping

from the top of a high wall. He frequently stated that he tried, but was unable to control these actions, and that he always felt great satisfaction after having given way to the impulse.

Thirteen cases were exceedingly dirty in their habits, throwing their urine and fæces about, and at times painting the walls with excrement. A case, who still remains in the asylum after three years, has needed special supervision to prevent his practising sodomy. He has been found teaching imbecile lads to masturbate, and has incited them to commit sodomy in order to blackmail them afterwards. He practises masturbation to an excessive degree; this, however, is a very common habit.

A large number of the cases had marked thieving proclivities, but it was very often impossible to bring the theft home to them, they, as a rule, being sufficiently cunning to steal from cases who could not bring charges from their demented or imbecile condition, the theft only being discovered during surprise inspection of their pockets and clothing, when money, etc., which they could not have come by honestly was found. One was detected rifling the pockets of an epileptic, who was on his knees at bed time, having noticed that his victim was usually long at his nightly devotions.

A few have stolen and secreted knives for future use, whilst others have improvised weapons or tools by sharpening bits of iron they have picked up, and fitting them into handles made from wood, or by binding rags around one end.

From the character of their delusions and hallucinations, with their other proclivities, it will be readily seen that a large number of these cases were very prone to take and give offence on the slightest, or, indeed, often for no provocation. They were frequently involved in broils, and a large proportion of the cases resident was always to be found in the refractory wards.

The mental symptoms, as a rule, abated considerably after a short residence in the asylum, but few made an absolute recovery, the improvement being due to the removal of the strict prison regime for the far greater freedom of asylum life, with the improvement of dietary, and the privileges of conversation, writing to, or receiving visits from their friends, etc.

Many had no known relatives, and on going through the

visiting books for the period under consideration it was found that 38 cases, or 29 per cent., had been visited by relatives. But few were visited regularly, many receiving

only one or two visits in a long period of years.

From the foregoing it will be seen that these cases are by no means a desirable class for reception into an ordinary pauper lunatic asylum, where they must mingle with the other patients, there being no provision made for treating them in special wards such as were arranged for by the Government to be attached to Bethlehem Hospital in 1814, and again to Fisherton House, Salisbury, in 1835.

The experience of this asylum agrees with one of the findings of a Select Committee appointed by the House of Commons in 1859 to enquire into the care of the criminal

insane, as quoted in Archbold's Lunacy:

"To mix such persons with other patients is a serious evil; it is detrimental to the other patients as well as to themselves; but to liberate them on recovery, as a matter of course, is a still greater evil, and could not be sanctioned, for the danger to society would be extreme and imminent." (Parliamentary Paper, No. 495, 1860.)*

One of the results of this Committee's Report was the building of the Criminal Lunatic Asylum at Broadmoor, which was opened in 1863, under what is known as the "Broadmoor Act, 1860." This is the only asylum that has hitherto been built under the Act, a Departmental Commission, appointed in 1880 to enquire into criminal lunacy,

finding amongst other conclusions:-

"3. That if it is necessary to make special provision for specially dangerous pauper lunatics, the proper course is for the local authorities of counties and boroughs, by united action, to build one or more asylums designed to receive such specially dangerous lunatics. (Parliamentary Paper, C—3,418, 1882)." + An excellent suggestion, which has not been acted upon.

Discussion.

The President said—In Northumberland I have had, with very few exceptions, only ordinary cases. I remember a patient, who, like some of those mentioned by Dr. Hearder, was of an abominable disposition. He appeared to have been at Wadsley Asylum previously, and I have every reason to suspect that he was a rogue, many of his symptoms having been feigned. He feigned melancholia with stupor so well that to this day I hardly know whether he was a scoundrel, a lunatic, or perhaps both together. He refused to be fed for three months, but would behave excellently for months together. What became of him I do not know. In his previous history there were many charges against

^{*} Op. cit., p. 726. † Op. cit., p. 728.

him for fraud, and his offences generally took the form of representing that he was So-and-so, getting money from the persons upon whom he imposed. When sent to prison he would lapse into the "insane" condition and be sent to an asylum, where he would remain for several months. On getting out he would recommence his fraudulent practices, and so do the round over again.

Dr. PERCIVAL-I understand that if a criminal lunatic dies before his sen-

tence expires the coroner should hold an inquest?

Dr. Hearder—On every convicted person. I believe also that it is the coroner's duty to hold an inquest on any person who has recently been a prisoner, whether in an asylum or whether he is one of the general population. Major Taylor, coroner for the West Riding, informed me of this. It may be in the Coroners' Acts, but the point is not mentioned in the Lunacy Acts.

Dr. RAY referred to an interesting case of a man who was transferred from the West Riding Asylum, Wakefield. After having been in the asylum two months he was discharged, his friends undertaking to look after him. Only two days afterwards, however, he was found in a house into which he had broken; he had made himself comfortable with whisky and cigars, and had filled his pockets with all the attractive articles he could find. He had been sitting there for an hour or so. The police took him to prison again, but he was discharged on trial. In spite of that he was brought up at the Police Court later, and committed for trial at the West Riding Assizes, which are at present proceeding. He had another very quiet case from Broadmoor, who had been there for five years. After having been at Broadmoor he still seemed to be

chargeable to the Union.

Dr. NICOLSON - This particular case, which occurred five or six years ago, is a man named Lyons, who, at Broadmoor, took the opportunity of splitting my head with a stone. On the expiration of his sentence I wrote to the authorities at Sheffield, and said that I had recommended his being detained in Broadmoor as a pauper lunatic on account of his violence. They wrote back with reference to 17s. 6d. per week being charged for him. I replied, "You are by all means welcome to him. We do not want him here, he is much trouble to us." We could not get him from his room, and it took three or four warders to look after him. He would not take exercise, and suffered from "telephonic communications." When I wrote and told the doctors my reasons for his being detained they were pleased to have him kept at Broadmoor. There was further correspondence, and the matter almost became a scandal. In the end the whole matter was referred to the Law Officers of the Crown, who said that the man had been illegally detained, and that the only way out of the difficulty was to send him to a lunatic asylum, which was done. It was a mere accident his having hit me. Lyons, with others, wanted to speak to me. It was not then convenient, so I told him I would come back later and he could then speak to me. He was crying out about being detained, and worked himself into a white heat. I saw that he would make for me. I said, "I'll come and see you again," and had got a little way, when hearing him behind I turned round, and was struck on the head. The general question of the paper is one of great interest, and the conclusion arrived at commends itself to us. It is very undesirable to introduce one of these criminal lunatics into an ordinary insane population, it is most disastrous to discipline and management. The difficulty might be overcome by separation—not allowing them to keep up turmoil, insubordination, and encouragement to escape. At Broadmoor this system was adopted, and these cases were kept in a special block by themselves. There is a certain hardship in removing such lunatics from asylums to Broadmoor, because of the inconvenience to the friends of the patients. It is surprising how faithful these friends are, and they cannot easily or often undertake a long journey. The short sentence men are most troublesome cases. I know one who stole a duck, and was imprisoned for a few months. He went out and stole again, and was certified to be insane. At last he was sent to Broadmoor, where he behaved himself, and was recommended for discharge. He committed himself again, and is now in Broadmoor. He will be kept there for life. Such a course is a

great pity. The Home Office do not understand such cases, and I think we ought to work so that these men would not be thus bandied about. It is most important that young workers should take up these matters and induce wholesome changes. The amount stolen by that type of criminal was trifling, and it is hardly fair to them to depict them in terrible colours. In one sense many of them are taught to be criminals and are therefore to be sympathised with. I thank you for the opportunity of being here. It is a great privilege, for I like to identify myself with the work going on in our various asylums.

Statistics Relating to the Disappearance of Rigor Mortis. By J. V. Blachford, M.B., C.M., Assistant Medical Officer, Bristol Asylum.

Of 220 cases in which post-mortem examinations were held the following were the conditions as to rigor mortis. It will be seen that in only 11 cases does the condition recorded militate in any way against the statement that "far from commencing in the jaw, then attacking the arms and lastly the legs, and disappearing in the inverse order," as was at one time taught, and as is stated at the present time in some of our text-books, in whatever order it may commence, it almost invariably disappears first from the jaw, afterwards from the arms and legs; in fact probably in the order of its appearance.

Absent in all extremities		33
Present in all extremities		65
Absent jaw, disappears arms, present legs	•••	25
Absent jaw, present arms and legs	•••	12
Absent jaw, disappears arms and legs		3
Absent jaw and arms, present legs	•••	2
Absent jaw and arms, disappears legs	•••	4
Absent arms, present legs	•••	26
Absent arms, disappears legs	•••	7
Disappears arms, present legs	•••	15
	-	
_		192
Present arms, disappears legs	•••	1
Slightly present arms, absent legs	•••	1
Present jaw and arms, absent legs	•••	1
Present jaw, disappears arms and legs	•••	3
Present jaw and legs, disappears arms	•••	2
Present jaw and legs		1
Disappears arms, absent jaw and legs	•••	1
Absent jaw and legs	•••	1
	_	11
Not noted	•••	17